No. 9700258

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Delta and Pine Land Company d/b/a Deltapine Seed

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR USING IT IN ODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY ECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'DP 5644RR'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of Washington, D.C. this twenty-eighth day of April, in the year of our Lord two thousand.*

PLANT VARIETY PROTECTION OFFICE · U.S. DEPARTMENT OF AGRICULTURE

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
Delta and Pine Land Company d/b/a Deltapine Seed

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER
DPX9756RR

3. VARIETY NAME
DP 5644RR

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
100 MAIN STREET
SCOTT, MS 38772

5. TELEPHONE *(include area code)*
601-742-3351

6. FAX *(include area code)*
601-742-3182

FOR OFFICIAL USE ONLY

PVPO NUMBER
9700255

FILING DATE
APR. 4, 1997

FILING AND EXAMINATION FEE
$ 2450.-

FEE RECEIVED DATE
APR 04 1997

CERTIFICATION FEE
$ 80

DATE
10/12/99

7. GENUS AND SPECIES NAME
Glycine max

8. FAMILY NAME *(Botanical)*
Leguminosae

9. CROP KIND NAME *(Common name)*
Soybean

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)* *(Common name)*
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Delaware

12. DATE OF INCORPORATION
October 19, 1978

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Harry Collins
P.O. Box 157
Scott, MS 38772

14. TELEPHONE *(include area code)*
601-742-4133

16. FAX *(include area code)*
601-742-3182

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow instructions on reverse)*

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of the Variety
d. ☒ Exhibit D. Additional Description of the Variety
e. ☒ Exhibit E. Statement of the Basis of the Applicant's Ownership
f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository)*
g. ☒ Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" *(Mail to PVPO)*

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)?*
☐ YES *(If "yes," answer items 18 and 19 below)* ☒ NO *(If "no," go to item 20)*

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☐ YES *(If "yes," give names of countries and dates)* ☒ NO

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*	SIGNATURE OF APPLICANT *(Owner(s))*
NAME *(Please print or type)* J. Grover Shannon	NAME *(Please print or type)* Harry B. Collins
CAPACITY OR TITLE Senior Soybean Breeder	DATE 3/27/97
CAPACITY OR TITLE Vice President Director of Research	DATE 3/27/97

EXHIBIT A

DELTAPINE SEED'S APPLICATION FOR DP 5644RR

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ORIGIN AND BREEDING HISTORY

Summer-Winter	1992	Original cross and first backcross made between an experimental breeding line DPX 2384 and Roundup Resistant experimental line 40-2-3
Fall	1992	DP 415 crossed with Roundup resistant F_1 plants from 2384 BC_1F_1
Winter	1993	P9592 crossed to Roundup resistant F_1 plants from DP415 x 2384 BC_1F_1
Summer	1993	Cross 93408 made - A5979 crossed to Roundup resistant F_1 plants from [P9592 x (DP 415 x 2384 BC_1F_1)]
Winter	1993-94	Roundup tolerant F_1 plants advanced to F_2 under lights from cross 93408 under lights in Costa Rica and F_2 seed was bulked
Summer	1994	Roundup resistant F_2 advanced to F_3 by modified single seed descent method in Costa Rica
Fall	1994	Roundup resistant F_3 plants space planted. Individual plant selections harvested and threshed separately
Winter	1994-95	F_4 Roundup resistant plant rows from cross 93408 were grown in 3 meter rows in Costa Rica. Row 93408-732 was selected, composited and determined to be stable and breeding true for characteristics described in Exhibit C of this application. No variants were known or observed at this time and hence to the present.
Summer 1995 - Fall 1995- Spring 1996		Yield tested at Scott, Mississippi.
		Border rows harvested and sent to Costa Rica for a double increase in fall of 1995 and winter of 1996. About 150 units of breeder seed were produced.
Summer	1996	93408-732 yield tested in 9 Deltapine Seed tests and increased to 4595 bushels of foundation seed. 93408-732 was designated as $DPX9756^{RR}$
Summer	1997	$DPX\ 9756^{RR}$ designated and released as DP 5644RR.

EXHIBIT B

DELTAPINE SEED'S APPLICATION FOR DP 5644RR

NOVELTY STATEMENT

To our knowledge, DP 5644RR most resembles H5566RR. Differences include, but are not restricted to the following:

DP 5644RR has dull seed coats and H5566RR has shiny seed coats.
DP 5644RR is high for peroxidose reaction and H5566RR is low for peroxidose reaction.

FORM APPROVED: OMB NO. 0581-0056

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT C
(Soybean)

PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Delta and Pine Land Company d/b/a Deltapine Seed	DPX9756RR	DP 5644RR

ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code)

100 Main Street
Scott, MS 38772

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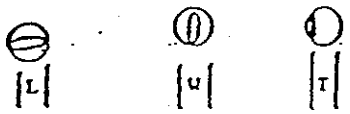
PVPO NUMBER 9700258

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:

[2]



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ 2. SEED COAT COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other (Specify) _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

[1] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ 4. SEED SIZE: (Mature Seed)

[1][5] Grams per 100 seeds

★ 5. HILUM COLOR: (Mature Seed)

[6] 1 = Buff 2 = Yellow 3 = Brown 4 = Grey 5 = Imperfect Black 6 = Black 7 = Other (Specify) _____

★ 6. COTYLEDON COLOR: (Mature Seed)

[1] 1 = Yellow 2 = Green

★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

[2] 1 = Low 2 = High

★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

[ ] 1 = Type A (SP1[a]) 2 = Type B (SP1[b])

★ 9. HYPOCOTYL COLOR:

[2] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ 10. LEAFLET SHAPE:

[3] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (Specify) _____

11. LEAFLET SIZE:

[2] 1 = Small ('Amsoy 71'; 'AS312') 2 = Medium ('Corsoy 79'; 'Gasoy 17')
3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[2] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton')
3 = Dark Green ('Gnome'; 'Tracy')

★ 13. FLOWER COLOR:

[1] 1 = White 2 = Purple 3 = White with purple throat

★ 14. POD COLOR:

[1] 1 = Tan 2 = Brown 3 = Black

★ 15. PLANT PUBESCENCE COLOR:

[2] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[2] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton')
3 = Bushy ('Gnome'; 'Govan')

★ 17. PLANT HABIT:

[1] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will')
3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ 18. MATURITY GROUP:

[0][8] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V
9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

★ 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

★ [2] Bacterial Pustule *(Xanthomonas phaseoli* var. *sojensis)*

★ [0] Bacterial Blight *(Pseudomonas glycinea)*

★ [0] Wildfire *(Pseudomonas tabaci)*

FUNGAL DISEASES:

★ [0] Brown Spot *(Septoria glycines)*

Frogeye Leaf Spot *(Cercospora sojina)*

★ [ ] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [2] Other *(Specify)* Race Unknown

[0] Target Spot *(Corynespora cassiicola)*

[0] Downy Mildew *(Peronospora trifoliorum* var. *manshurica)*

[0] Powdery Mildew *(Microsphaera diffusa)*

★ [0] Brown Stem Rot *(Cephalosporium gregatum)*

[2] Stem Canker *(Diaporthe phaseolorum* var. *caulivora)*

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

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FUNGAL DISEASES: (Continued)

★ [0] Pod and Stem Blight (*Diaporthe phaseolorum* var. *sojae*)

[0] Purple Seed Stain (*Cercospora kikuchii*)

[0] Rhizoctonia Root Rot (*Rhizoctonia solani*)

Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)

★ [2] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [ ] Race 6 [ ] Race 7

[ ] Race 8 [ ] Race 9 [ ] Other (Specify) _____

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

★ [0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[1] Pod Mottle (Bean Pod Mottle Virus)

★ [1] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode (*Heterodera glycines*)

★ [ ] Race 1 [ ] Race 2 [2] Race 3 [ ] Race 4 [2] Other (Specify) Race 14

[0] Lance Nematode (*Hoplolaimus Columbus*)

★ [1] Southern Root Knot Nematode (*Meloidogyne incognita*)

★ [0] Northern Root Knot Nematode (*Meloidogyne Hapla*)

[1] Peanut Root Knot Nematode (*Meloidogyne arenaria*)

[0] Reniform Nematode (*Rotylenchulus reniformis*)

[ ] OTHER DISEASE NOT ON FORM (Specify): _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

★ [0] Iron Chlorosis on Calcareous Soil

DP5665RR

[2] Other (Specify) DPX9756RR is tolerant to high chloride soils

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle (*Epilachna varivestis*)

[2] Potato Leaf Hopper (*Empoasca fabae*)

[0] Other (Specify) _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	H5566RR	Seed Coat Luster	H5088RR
Leaf Shape	H5566RR	Seed Size	DP 3519^{S}
Leaf Color	H5566RR	Seed Shape	H5566RR
Leaf Size	H5566RR	Seedling Pigmentation	H5088RR

21. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
DP 5644RR									
DPX9756 RR Submitted	128	1.2	56					15	
H5566RR Name of Similar Variety	127	1.0	48					14	

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.

2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.

3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A_2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.

4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

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EXHIBIT D

DELTAPINE SEED'S APPLICATION FOR DP 5644RR

ADDITIONAL DESCRIPTION OF VARIETY

DP 5644RR is an F_3 Roundup tolerant selection composited in the F_4 generation from the cross of A5979 x [P9592 x(DP 415 x2384 BC_1F_1)] Cross 93-408 with Roundup tolerance derived from line 40-3-2. It has white flowers, tawny pubescence, and tan pods. Seeds are dull yellow with black hila averaging 3000 seeds per pound. Yield results in nine Deltapine Seed tests show that DP 5644RR is very competitive in yield compared to DP 3588 and Hutcheson and superior to Roundup tolerant varieties AG5601, H5088RR, and H5566RR. DP 5644RR is moderately resistant to races 3 and 14 soybean cyst nematode, and moderately resistant to aerial blight and stem canker. It is susceptible to root knot nematodes and soybean mosaic virus. It is tolerant to high chloride soils.

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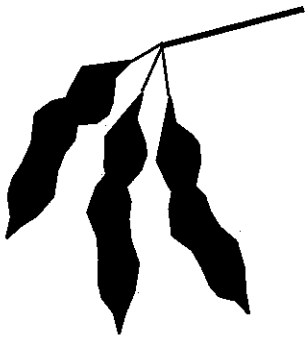
SOYBEAN PRODUCT NOMINATION FORM

Suggested Nominee Number: DPX 9756RR

Experimental Designations: 93408-732 Key #5878 DPX 2RR

Submitted by: Grover Shannon, Gus Dunlap



Date Submitted: January 1, 1997

Parentage: A5979 x [P9592 x (DP 415 x 2384 BC_1F_1)] Cross 93-408
2384 - Selection from DP 415/DP 105

Maturity: Mid-group V - RM = 5.6

Data Collected from 9 Replicated Yield Tests.

I. Plant & Seed Characteristics:

Flower Color:	White
Pubescence Color:	Tawny
Hilum Color:	Black
Pod Wall Color:	Tan
Seed Coat Luster:	Dull
Leaf Shape:	Ovate
Plant Type:	Determinate

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DPX 9756RR

DPX 9756RR is an F_3 Roundup tolerant selection composited in the F_4 generation from the cross of A5979///P9592//DP 415/2384 BC_1F_1 with Roundup tolerance derived from line 40-3-2. It has white flowers, tawny pubescence, and tan pods. Seeds are dull yellow with black hila averaging 3000 seeds per pound. There may be up to 1% plants with either/or purple flowers, gray pubescence and hila other than black. Yield results in nine D&PL tests show that DPX 9756RR is very competitive in yield compared to DP 3588 and Hutcheson and superior to Roundup tolerant varieties AG5601, H5088RR, and H5566RR. DPX 9756RR is resistant to races 3 and 14 soybean cyst nematode, and moderately resistant to aerial blight and stem canker. It is susceptible to root knot nematodes and soybean mosaic virus. It is tolerant to high chloride soils.

KEY FEATURES

- Very good yield potential
- Tolerant to Roundup Herbicide
- Medium plant height with good standability
- Moderately resistant to stem canker and aerial blight
- Resistant to races 3 and 14 cyst nematode
- Susceptible to root knot nematodes

CHARACTERISTICS

Maturity	Mid group V
Flower Color	White
Pubescence Color	Tawny
Hilum Color	Black
Plant Height	Medium
Lodging Resistance	Excellent
Shatter Resistance	Excellent
Seed Size	Medium(3000 sd/lb.)
Stem Canker	Moderately Resistant
Phytophthora Root Rot	Field Tolerant
Cyst Nematode	Resistant to Race 3 and 14
Common Root Knot Nematode	Susceptible
Peanut Root Knot Nematode	Susceptible
Lance Nematode	Unknown
Red Crown Rot	Unknown
Aerial Blight	Moderately Resistant
Frogeye Leaf Spot	Resistant
Sudden Death Syndrome	Unknown
High Chloride	Tolerant
Soybean Mosaic Virus	Susceptible

II. Agronomic Characteristics: 1996

Line	Mat.	Plant Height	Ldg.	Shat.	Seeds\ Lb.
DP 3588	+3	27	1.5	Exc.	2700
DPX 9756RR	0	22	1.2	Exc.	3000
HUTCHESON	0	16	1.0	Exc.	2800
AG5601	-5	18	1.1	GOOD	3500
H5088RR	-2	19	1.2	Exc.	3500
H5566RR	-2	19	1.1	Exc.	3200

III. Yield Data:

1996 Yield & Agronomic Data Summary

Line	Yield	% Yield	Mat.	Hgt.	Ldg.
DP 3588	46.9	102	+3	27	1.5
DPX 9756RR	46.1	100	0	22	1.2
HUTCHESON	45.9	100	0	16	1.0
AG5601	41.8	91	-5	18	1.1
H5088RR	39.1	85	-2	19	1.2
H5566RR	38.5	84	-2	19	1.1
# Tests	9	9	3	9	9

Yield Summary in Bu/A

By Region: 1996

	N of I-40		S of I-40		MEAN	
LINE	YLD	% YLD	YLD	% YLD	YLD	% YLD
DP 3588	35.0	83	52.9	111	46.9	102
DPX 9756RR	42.5	100	47.9	100	46.1	100
HUTCHESON	42.4	100	47.7	100	45.9	100
AG5601RR	35.2	83	45.3	95	41.9	91
H5088RR	30.1	71	43.3	91	39.1	85
H5566RR	34.8	82	40.7	85	38.5	84
# TESTS	3	3	6	6	9	9

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By States: 1996

LINE	TN	AR	MS	LA	NC	MEAN
DP 3588	38.6	44.1	46.3	62.1	34.7	46.9
DPX 9756RR	51.3	48.3	32.5	57.2	39.4	46.1
HUTCHESON	46.8	47.3	32.6	60.2	39.4	45.9
AG5601RR	44.5	43.2	31.8	52.9	34.2	41.9
H5088RR	37.2	36.6	34.3	53.2	29.5	39.1
H5566RR	37.2	42.9	22.8	50.7	35.9	38.5
# TESTS	1	3	2	2	1	9

By Soil Type Planting and Disease Situation: 1996

Line	Loam	Clay	Cyst	Early Planted	Aerial Blight	Mean
DP 3588	35.1	58.5	50.2	46.6	53.1	46.9
DPX 9756RR	42.5	46.7	54.1	34.3	51.7	46.1
HUTCHESON	42.4	51.0	50.5	31.1	50.5	45.9
AG5601RR	35.2	46.0	51.4	38.1	39.1	41.9
H5088RR	30.5	49.8	42.5	30.9	44.5	39.1
H5566RR	34.8	44.6	48.7	22.8	35.0	38.5
# TESTS	3	2	2	1	1	1

YIELD IN BU/A
BY TESTS AND LOCATIONS

1996 - 655M

LINE	TN UC	AR HS	AR DW	AR DM	MS SL	MS SC	LA TL	LA MG	NC CL	Mean
DP 3588	38.6	31.9	46.0	54.4	46.6	46.0	71.0	53.1	34.7	46.9
DPX 9756RR	51.3	36.8	50.3	57.9	34.3	30.6	62.7	51.7	39.4	46.1
HUTCHESON	46.8	41.0	46.5	54.4	31.1	34.0	69.9	50.5	39.4	45.9
AG5601	44.5	26.9	47.9	54.8	38.1	25.4	66.6	39.1	34.2	41.9
H5088RR	37.2	24.7	39.7	45.3	30.9	37.7	61.9	44.5	29.5	39.1
H5566RR	37.2	31.3	49.4	48.0	22.8	22.8	66.4	35.0	35.9	38.5
C.V. %	10.4	13.6	12.0	7.8	13.5	13.2	5.9	9.3	11.0	
LSD.10	6.6	6.4	5.5	4.7	6.1	5.7	4.2	4.7	3.9	

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IV. DISEASE REACTION AND OTHER INFORMATION:

Cyst Nematode

DPX 9756RR is moderately resistant to both races 3 and 14 of soybean cyst nematode.

	Race 3				
	1996				
Rating	1	2	3	4	5
DPX 9756RR	3	1	1	2	0
Res. Chk.	9	0	0	0	0
Sus. Chk.	0	0	3	8	2

Location: Jackson, TN
Conducted by: Dr. Lawrence Young
USDA, Nematologist

	Race 14				
	1996				
	1	2	3	4	5
DPX 9756RR	2	2	2	2	0
Res. Chk.	3	4	0	0	0
Sus. Chk.	0	0	0	0	6

Location: Jackson, TN
Conducted by: Dr. Lawrence Young
USDA, Nematologist

Root Knot Nematode 1 = No galling 5 = Very severe galling

DPX 9756RR is susceptible to both common and peanut root knot nematode.

	Common Root Knot M. Incognita 1996	Peanut Root Knot M. arenaria 1996
DPX 9756RR	2.3	3.3
Res. Check	0.0	2.0
Sus. Check	5.0	5.0

Location: Jay, FL
Conducted by: Dr. Robert Kinloch
Professor of Nematology
University of Florida

Stem Canker 1 = No symptoms 5 = Very severe symptoms
DPX 9756RR is resistant to stem canker.

	1996
DPX 9756RR	0.7
HARTWIG	5.0
P9592	0.7
DP 415	0.0

Location: Scott, MS - Greenhouse
Conducted by: Grover Shannon

Frogeye Leaf Spot
DPX 9756RR is probably resistant to frogeye leafspot based on limited tests.

Sudden Death Syndrome
DPX 9756RR is untested against sudden death syndrome.

Aerial Blight 1 = None 5 = Very Severe
DPX 9756RR is moderately resistant to aerial blight.

	1996
DPX 9756RR	1.5
DP 3588	1.9
HUTCHESON	2.7
CLIFFORD	4.0
H5566RR	3.8

Location: Morganza, LA
Conducted by: Grover Shannon

Herbicide Tolerance
DPX 9756RR is tolerant to the herbicide roundup. It has no known sensitivity to other herbicides used according to the herbicide label.

Chloride Tolerance
DPX 9756RR is a root excluder of chloride and is considered tolerant to withstand high chloride conditions in soils.

	No. Of Plants as Chloride	
	Includers	Excluders
DPX 9756RR	0	5

Soybean Mosaic Virus
DPX 9756 is susceptible to soybean mosaic virus based on limited observations.

Seed Stock
There are 4595 bushels of DPX 9756RR foundation seed.

9700258

EXHIBIT E

DELTAPINE SEED'S APPLICATION FOR DP 5644RR

STATEMENT OF APPLICANT'S OWNERSHIP

DP 5644RR was originated and developed by Grover Shannon, Ph.D., Deltapine Seed Soybean Breeder. By agreement between employee and Deltapine Seed, all rights to any invention, discovery or development made by an employee are assigned to the company. No rights to such an invention, discovery or development are retained by an employee.